/157 cont./

241 the process of being charred. The pillar of smoke that had drawn our attention for several days is explained: the forest was
122 being cleared in order to lay out a planting. Eagerly scouting, we climb up, and again we are wandering along the forest path.

/158/ "Beijú," somebody cries in a suppressed voice and
[262] triumphantly points to a few crumbs, which give us the prospect of new provisions; "they have beijús," each one murmurs to the man behind him.

● [411] There -- a feather-decorated arrow leans against a tree
824 -- the tube of ubá, the wood from which the Imperador /emperor/
[773] of the legend created the Bakaïrí. We become more serious, and even the Negroes, who, when they are afraid, like to try to give themselves courage by chattering march on silently. Now and then small fires, alive or burned out. We have already been
[137] walking three-quarters of an hour. But see there, a new clearing -- a charming grove of nut-bearing bacayuva palms -- a few kernels of maize on the ground, again a bit of forest and: "Casas -- houses," the first man cries.

361 Three houses of the form of a beehive become visible; in
342 the first hut, which blocks our path, the low door stands open; in the dark we make out a few heads. A completely naked
609 Indian steps out, young, well built, closes the door, and comes
[291] toward us, in his hand a long arrow shaft without a point, which he holds horizontally in front of him.

I instruct Antonio to call out a greeting to him in Bakaïrí. "Kɣulino," cries Antonio almost breathless, and -- hail to the antiguos -- the Indian answers in Bakaïrí. Eagerly he steps up to Antonio, leans against him, and both embrace as they walk on -- both talking at the same time, both trembling all over with fear and excitement.

[302] A joyful feeling of release overcame us all, and when Manoel, discovering that our dear savage wears a nicely shaved tonsure, now finally recovers his speech and cries out, "Oh, why that's a priest, the compadre is a parson," general laughter breaks out, and everybody talks at once.

/160 cont./

437 439 [554] carried each piece that she captured to a secret repository lying back off the road, immediately most hurriedly hastening forth for new deeds.

609 At noon Wilhelm and I went to the aldea;[1] Antonio accompanied us, but, suspicious of his fellow tribesmen, he could not make up his mind to stay with them during the night and returned to the river in the evening.

122 We set up housekeeping in the festival hut, and, alone with the charming little people, we felt indescribably content. When toward evening the mosquitoes started to annoy us, we took a [137] walk to the roça.[2] Greedily we looked about for the "frutas de lobo," apple-round fruits which were present in numbers on gray-green shrubs, but unfortunately not ripe; the Bakaïrí boys are no different from ours. A magnificent estate; the horizon was bordered by a dark park, behind which the sun was setting in 291 reddish orange. We met Pauhaga, as our apostle of peace is 177 called, and his relatives on the plaza between the three huts, trying on clothes in great embarrassment. They urgently needed our help; not only did they put the trousers on in reverse and upside down over the legs, but they also tried to draw them up over their arms and wanted to stick their legs into a shirt. Putting on a coat alone was an impossible thing. They were unaware of the most obvious offenses against the elements of propriety. A safety pin was hugely admired, but most of all a pair of scissors with which 412 one could so conveniently cut one's nails. Their tool, the stone ax -- a ground stone is wedged into a wooden handle -- with which they fell trees and make posts, deserves our appreciation no less, from the standpoint of how much can be accomplished with the simplest means, even though in the unspoken accompanying thought that we ourselves /161/ might have to go back to this [411] stage there is a slight admixture of horror. They have no spears, [231] no bananas, no dogs, and tobacco is nowhere to be found. Bones, [276] teeth, shells must serve them as tools, along with the stone ax. [237] /Illustration appears here./

[1] [i.e. village -- Analyst]
[2] [i.e. Cultivated field -- Analyst]

[TEXT continues on P. 40]

/164 cont./

415 Countless gourd vessels /cuyen; see glossary, p. 170 / and
531 calabashes, brownish-yellow, some of them painted black in designs not without taste.

411 In the lower roof-basket are stuck the arrows, averaging two meters long, and the bows, which almost reach a length of two and a half meters. The arrows, made of ubá, have simple wood or bone points; at the end of the shaft broad feathers are set spirally.

237 Feathers, even bunches of them and whole tail rosettes,
415 are kept in mats placed together portfolio-like; spindles, pigment, bones, root pieces, shells, and the like are kept in small baskets and nets. On the cords of the hammocks are found as
412 decoration a couple of feathers or shells and -- the comb. This
[284] toilet article consists of small, narrow sticks placed next to one another and held together by two cross-sticks of bamboo by means of a plaiting of cotton threads; the hard sticks project beyond the lower cross-stick as the teeth of the comb.

286 The hammocks are (one can hardly say woven, but rather knotted. Two posts stand in the ground; they are wound with a skein of cotton in the way that our women wind knitting wool on a chair; through the horizontal, parallel threads, vertical threads are drawn at four-centimeter intervals with guide sticks and knotted; the parts of the skein which lie close to the post and are not knotted (the entire bundle of horizontal threads pressed together) form the loop that receives the hammock ropes.

285 A plaited matting above the door and sieves of alternating black and light straw are worked with a natural artistic sense. The fire is fanned with a triangular piece of matting.

302 The hair of the women, cut unevenly and longest behind the ears, hangs down to the shoulders; the forehead is almost completely covered. A young woman had the latter painted with thick red color during the visit on the river. No ornaments. Only
301 the old woman wears a string over her left shoulder, which goes under her right arm; three trouser buttons, which she cut off from us and the soldiers with her own hands, are strung on it.

/52 cont./

123 609 the tree skeleton, as though the man were dancing there like a cannibal in a show booth. "Bakaïrí ...," I commence once more, when luckily Antonio comes bounding up with mighty leaps, and, half out of breath from excitement, he for his part now shouts a long explanation downriver, which again I do not understand, but which releases a grateful howl of exultation on the part of the entrenched hero and clarifies the situation as though by a stroke of magic.

[501] [29] [411] The canoe shot out of its hiding place and hastened at once, a fine, long, dry bark-canoe, toward our sad, crooked, wax-plastered, loam-smeared vessel laved with dirty water -- truly, I thought, we were the ones who were entering the sphere of a higher culture here; even though the noble boatman was dressed with only a belt-cord and carried with him nothing but the neatly worked, feather-trimmed arrows and the bow which lay on the floor of the canoe beside a calabash filled with honey, nevertheless in its trimness and cleanliness this total picture gliding toward us contrasted most advantageously with us ragged bearers of civilization beside the piece of wet-rot bark that was called our boat. Well, the newcomer clearly showed by his facial expression that for his part he nevertheless admired us.

123 152 He did not behave at all like the silent, gloomy Indian whose soul, as I might have expected on the basis of our school-wisdom, reflected the monotonous, oppressive environment of the tropical forest; rather, he laughed /53/ and chatted with his fellow tribesman Antonio as though he had [576] grown up in a fortunate country of the temperate zone. In a few minutes we were good friends; at my urging he even told us his name, which, of course, according to the custom of his country, he could not do without modest hemming and 551 622 hawing. His name was Tumayaua and he was the chief of a village of the Bakaïrí a few hours away.

123 609 Thus actually of the Bakaïrí! The hope of the past weeks was fulfilled, we entered our research area among a good-natured little people well known to us, and our debut

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2: Steinen--40 E, D-5 (1884, 1887-1888) 1894 SP7 Bacairi SP7

Bakaïrí

Luchu

Tumayaua

/178 cont./

*171 826 If the eye is the most valuable of all human organs, these forest dwellers in quest of animals and fruits are dependent on it to the highest degree imaginable. Never have I heard an Indian complain and whimper as did the chief of the Yaulapiti bemoaning his blindness. Yet in treatment they do not necessarily develop [957] the insight that seems proper to us. Since tobacco smoke is the best medical remedy, a badly inflamed conjunctiva is blown full of smoke as forcefully as possible. Thus the idea that the lashes protect the eye is quite foreign to the Indians. They maintain that the lashes hinder the eye in seeing, especially if they want to peer sharply into the distance. That they are anxious to care for [957] the precious organ according to the best of their knowledge is [411] shown by the fact that the area around the eye of the boy who is to become a skilled archer is scratched bloody with the scarifier -- naturally because they believe in this "medicine" and not because [302] they want to harden him. In the case of the lashes in particular, the seemingly cruel plucking, since it is radical, is nevertheless a relatively mild procedure. To endure the cutting and shaving on the edge of the lid with fish teeth and shells would indeed be heroic.

*171 302 304 The skin. The skin is pierced to receive ornaments, it is painted with color, and it is scratched with spines or teeth. The two last methods have developed into artistic treatment, into body painting or tattooing -- one would only like to know what original purposes lie behind them.

*171 301 If we observe, on the basis of thousands of examples, to what degree coquetry and vanity triumph over physical discomfort in matters crude and fine among our pampered, civilized human beings, we shall not be surprised that the vanity of primitive peoples is even more reckless. The chief difference between us and them is merely that they are obliged to do on the skin what we are able to do with clothing. Among them, however, it was everywhere first of all the man who adorned himself. He began doing so as a hunter, and since there is the matter of manifesting the hunter's vanity, we may conclude that man first developed the idea of the trophy by not separating himself from the parts of the booty that were inedible, /179/ yet could easily be preserved and

/204 cont./

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[317]

embedded individual crystals of olivine and quite a number of quartz granules. The blades, 11-21 centimeters long, are usually evenly cylindrical, but some are round in the center like a roller, taper toward the rear, and have a broad front end with a bow-shaped cutting edge. Without any lashing, they fit into a wooden handle 0.5 meters long on the average, which consists of a cylindrical upper piece bored crosswise and a thinner handle set off from this like a reed stalk from its spike. The stone points inserted in the darts and the ornamental stones of the neck chains are made of the same diabase. The Trumaí ground the blades to a point on their stones and bored the ornamental stones; besides them, only the neighboring Yaulapiti did this. The other tribes simply sharpened on the river sandstone the axes that became dull. Shells and stones were bored with a twirl-borer. A triangular, hard splinter of stone was clamped to a small staff, and, to be sure, at both ends so that one could alternate them, and was secured by cord lashing. The little staff was almost half a meter long and was twirled between the hands. If stone was to be bored, sand was added. This is all the Indians achieved in the working of stone; they had

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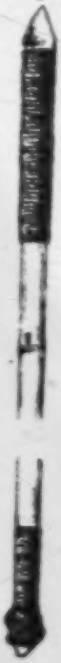

Fig. 21.
Twirl-borer.*
(1/2 nat. size/ as shown in the original illustration/.)

*The twirl-staff is represented discontinuously.

/205 cont./

*171 237 412 825 be broken off evenly. A scarcely less important tool was furnished by the peixe cachorro, or dogfish, called Cynodon zoologically, which has in its lower jaw two pointed teeth three to three and a half centimeters long, each projecting upward through a hole. The edge of these teeth, ground knife-sharp, was used for cutting, but chiefly for puncturing, for example, in connection with tattooing, for scratching, for example, in decorating the tortoise spindle disks, and for boring reeds, as in the case of the arrows, in order to put through the threads for fastening the feathers and 824 points. /206/ The triangular pieces of gourd which, as the scarifier, represented the most important instrument in the little surgery of the Indians, cf. Figure 15 /see p. 179/, were studded with the small, pointed teeth of the trahira fish, Erythrinus. The 825 little teeth of the agutí, Dasyprocta aguti, served the same purpose. Of the rodents, the capybara, Hydrochoerus capybara, fur- 284 nished indispensable scraping chisels with the front teeth of its lower jaw; the tooth, six to eight centimeters long, was fastened to a piece of ubá reed with cotton thread, or two teeth were lashed together and cemented with a little wax. /Figs. 23-26 appear here./ The arrow holes were likewise bored with the agutí tooth. 301 Monkey teeth, pierced at the root and artfully plaited together into a chain, were a favorite belt or neck ornament.

Bones. Arm and leg bones of monkeys, which were kept in 411 thick bundles in the little tool basket at home, served as arrowheads. They were ground to shape and, with their hollow tubes, mounted on the stick between the arrowhead and arrow shaft. The tail radiation of the ray was likewise an arrowhead. Small, pointed 304 bones were added as barbs. /207/ Mammal bones had many uses: the skin treated with the scarifier was rubbed with the thigh bone of the deer; we saw a splinter of a jaguar bone pointed to pierce ear lobes; the wax smeared over the lashing on arrowheads was 825 applied with a bone. The front claws of the giant armadillo, Dasypus gigas, served man, as well as the animal itself, for digging and grubbing up the ground and were the earth hoe of our Indians. The spindle disks in many cases came from the ventral piece of the tortoise shell, which was broken to pieces with a stone. Jaguar

/208 cont./

*171 239 30 [411] [289] Feathers lend wings to the arrow, on whose shaft end two split halves of feathers are sewed opposite each other in spiral turns. Otherwise they seem to be used exclusively, but in great volume here, for ornaments, such as ear feathers, feather crowns, feather caps, feather arm bands, feather cloaks (among the Kamayurá), and in hundredfold decoration on small ornaments, where little colored bundles hung on hammocks, combs, gourd rattles, arrow throwers, masks, etc. The most magnificent material was available, from the yellow, blue, red, and green [825] of the arara, toucan, weaver birds, and parrots, from the beautiful stripes or speckles of the curassows, falcons, and owls, to the shimmering white of the herons and storks or the black of the urubu vulture. The big, broad, black-and-white striped flag [825] of the Harpyia destructor was magnificent.

*17 [239] [412] [433] The spoils of hunting and fishing therefore offered an abundance of the most necessary things; in particular it furnished tools for cutting, scraping, polishing, piercing, boring, scratching, and digging. Agriculture assured the natives a sedentary existence and improved their economic condition, but they still remained fishermen and hunters, though to a lesser extent. They were hunters without dogs, fishermen without hooks, farmers without plow and spade. They afford us an excellent example [32] that teaches us how manifold the methods of work for the purpose of making a living could have been before the possession of any metal technique, an example that warns us about overestimating the importance of stone implements, which, of course are preserved the best and most plentifully for posterity, and about throwing indiscriminately into the great pot of the Stone Age everything that comes before the use of metal and, in comparison to the small span of time established for this, must embrace unimaginably long periods.

*171 433 511 If one judges culture according to the extent and thoroughness with which the surrounding nature is exploited by the human beings, then our natives certainly did not stand on a low level. [229] They hunted and fished with arrow /209/ and bow; they fished with nets, catch-baskets, and weir-baskets; they had their fish

/228 cont./

fire-maker. I also remembered the stick of pressed dry cow dung which is allowed to glow for many hours on the decks of Indian ships for the use of smokers. Perhaps a corresponding use of wood dust is to be found here and there. Wood shavings were used by us in historical Germany up to the beginning of this century, along with flint and steel.

V. Weapons, Implements, Industry.

Bows and arrows. Throwing stick. Club. Canoe. Fishing implements. Plaiting and textile work. Buriti and cotton hammocks. Gourd vessels. Pottery.

I have reported on the settlements, the way of life, and the tools of our Indians, insofar as they present peculiarities. What remains to be said about one implement or another will follow naturally within the framework of the description of arts and crafts, which, on account of the many new things, requires a special survey. On the other hand, it is advisable to say a little more about the appearance and the use of the weapons, as well as about the simplest craft skills.

Bows and arrows are the only weapon common to all our Indians. Clubs are used among the Suyá and Trumaí. Nowhere are there lances. Nowhere blowgun and poisoned arrows. Only the sorcerer has a kind of theoretical poisoned arrow when, as we shall see, he secretly and with powerful witchcraft hurls poisoned twigs at his victim; at any rate, the idea of a projectile poison comes before us here.

/229/ Bows and arrows are distinguished by their size, the arrows by the extremely neat and pleasing workmanship. The length of the bows is more than two and a third meters, that of the arrows one and a half to almost two meters. The wood of the bow is yellowish or light brown and comes from the aratá tree, Tecoma, and others. We found palm wood in only a few bows of the Tupí tribes; here, too, the bow was plaited round with cotton in an attractive pattern, something unknown among the other tribes. The bowstring is twisted out of tucum fiber.

/229 cont./

*171 •411 The arrow is by no means a simple work of art; if one compares the arrows of our tribes, among whom an ethnographic leveling has taken place, with the arrows from neighboring regions, one always notices, on careful examination, differences of material or technique. The arrows of the Yuruna on the lower Schingú, those of the Karayá /Caraja/ in the east toward the Araguay /Araguaia/, those of the Paressí in the west, those of the Bororó in the south, as well as those of the Yarumá, always have their distinct characteristics. Like comparative linguistic research, it is possible to carry on comparative arrow research. When we came to a new tribe we often saw with what interest the specimens brought along from the neighbors were examined and judged; aside from our clothes, nothing seemed stranger to these people than our lack of bows and arrows. If it is difficult [619] to understand how the Indian imagines that his culture heroes created the individual tribes by bewitchment of the arrow reed that they stuck into the ground, nevertheless it is easy to understand the basic idea that the arrow is the characteristic mark of the tribe, the great sorcerer also chooses for each tribe the type of reed that distinguishes its arrows. [824] The kambayuva reed furnishes more delicate, thinner shafts than the ubá reed; the docile Bakaïrí, since they have made the acquaintance of rifles, have given up the ubá reed commonly used on the upper Schingú and now have, if not exactly toy arrows, at any rate small arrows in comparison with those of the Schingú. The bows, (1.70 meters), too, have become smaller.

*171 411 237 The simplest arrow consists of the feathered reed shaft and, driven into it, a thin stick of wood which protrudes a third of a meter and is slightly pointed. Below the point there is sometimes fastened a small barb, for which a small tooth or preferably the maxillary spike of the great ant-bear is used. Or else a long piece of hollow cylindrical bone from monkey arm or leg bones, whole bundles of which are collected at home and the bone ground down, is driven onto the wooden point at the top. Wax, which is applied with a bone, is used as a binding agent. The ray spine also makes an arrow point. Finally, the barb may be made by placing a curved, double pointed piece of bone into the

B /229 cont./
*171 laterally hollowed end of the wooden support, lashing it, and
●411 covering it with resin.
[237]

Sometimes a pierced, hollow tucum nut is shoved up on the arrow shaft to slightly above the middle; one or two holes are cut into the nut on the side. In flight a high-pitched whirring or whistling is heard. /230/ While the noise-making arrows are used only for bird hunting, the others are intended for all hunting and the shooting of fish; those with barbs are exclusively
B fish arrows. Arrows with sawlike notched wooden points do not
[101] occur on the Schingú except among the Yarumá, whom we regard as a southern group of the Mundurukú /Mundurucu/ of the Tapajoz /Tapajós/.

T The Suyá and Trumaí had arrows with long pointed bamboo
171 knives for war and for hunting jaguar. Spindle-shaped bamboo
411 splinters up to 35 centimeters long and up to 36 millimeters wide,
[824] knife-sharp on the edges, are mounted on the wooden stick driven deep into the reed shaft; the wooden stick is embedded in a groove
T cut below along the inner surface of the splinter. And, to be
[284] sure, the pointed spindle is only loosely fastened with a little resin and thread; when shot it remains in the body that was hit, while the shaft with the wooden stick flies off behind it.

B The most remarkable thing about the arrow is the feathering
*171 at the lower end. Two feathers, more correctly two halves of
411 feathers, for the feather is split at the shaft, are carefully fastened
237 in a spiral twist which goes around one-fourth of the circumfer-
ence, each flag stands with the plane of its upper part perpendicu-
B lar on that of its lower part, so that the flying arrow spirals
[284] through the air. The feathers are set in a row of small holes, which are made with an agutí tooth and enlarged with a pointed buriti splinter, and, one may say, are sewed onto the arrow; the cotton thread is wound around the ends and is itself protected by
B being wound with waimbé bark (Philodendron). Usually the
[825] feathers come from gallinaceous birds, jakú (Penelope) and mutung (Crax), from the falcon, and from the blue arara. Where the hand grasps the arrow shaft there is a wrapping of waimbé. At the bottom a notch is cut in parallel to the upper part of the feathers.

/230 cont./

*171 ●411 Children's arrows are similar, but smaller, with wood and bone points or (those of the earliest youth) flexible, thin stalks split off from palm-leaf panicles.

The bow is usually held vertically. The arrow lies to the left of the bow. It is held between the index finger and the middle finger, which draw back the bowstring, while the fourth and fifth fingers also help to stretch the bowstring. The thumb is not used. This way of drawing the bow, corresponding to the Mediterranean draw of Edward S. Morse, is different from that of the Bororó. Devices to protect the finger against the strong friction of the bowstring are not used. The left hand, holding the bow, can also hold a second arrow in reserve.

The arrow is sighted at the target only for short distances; if the distance is great the bow is held up high, the arrow flies upward in a vertical direction toward the target and sinks down toward it. On the river, for example, if an otter playing in the distance is to be shot, an extremely fascinating sight, with the picturesque pose of the naked archer standing in the low canoe! /231/ In shooting fish the arrow point is frequently dipped into the water to test the degree of light refraction. No little practice is required for fish-shooting. The companion sitting in the rear rows slowly while the archer stands in front ready to shoot and sharply on the lookout. One of us does not see any more than the Indian would if he were to look into the microscope for the first time. A slight change of wave form already discloses the booty to him. With this he must remain as quiet as a mouse; the oar is soundlessly dipped. Many a shot, moreover, goes astray, and often two or three of the beautiful arrows drift sadly on the water until they are recovered. No wonder that our fishing rod seemed like a revelation to the Indians. Although they were not acquainted with the rod, they nevertheless knew about bait. But that floating freely. The archer tossed a scarlet berry into the river from the canoe; at the moment when a snout snapping at it from below tried to gulp it, the arrow whizzed from the bow. Anyone looking for a new sport might try it. The

*171 411 226 [822]

*171 411

B /231 cont./
*171 Indians practice on the village plaza and, as a target, plant a
411 shaft which bears at the top a cylindrical or conical piece of cork wood.

T The throwing board, in our case, where there is no "board"
171 often called a throwing stick,* is now a rare weapon which was
411

* For our case the best expression would be "arrow thrower." "Throwing stick" too easily gives rise to confusion with sticks that are thrown.

found among only the two Tupí tribes, the Kamayurá /Camayura/ and Auetö, and among the Trumaí. It was the greatest ethnological surprise of our journey. Ehrenreich then also came across it among the Karayá on the Araguay. Replaced by the bow, it has remained in active use only among the wood-poor Eskimo. The North American Indians, as far as is known, were not familiar with it; among the ancient Mexicans and among the Maya, as well as among the inhabitants of Colombia, it appears in limited use, though a wider distribution in early times may be inferred; it is regarded as the weapon of the Inca warriors; and finally we see individual examples of it among South American primitive peoples, especially Tupís, on the high Amazon as well as in eastern Brazil. Among our tribes, too, the throwing stick had lost its real importance, or at least was on the point of losing it. Nevertheless, in every house there were more throwing boards than bows; the Indians said that they never used the weapon any more for hunting, to be sure, but certainly in war. In 1884, when the Trumaí appeared before our camp, they had no throwing boards with them; the stone balls with which the darts are equipped for serious use were not present in any number among the Auetö and Kamayurá; they, too, had to get them from the Trumaí, and thus, for the Tupí tribes at any rate, if only because of their geographical location, the days of the throwing board are numbered. As a
T [526] sporting weapon, however, it still enjoys great esteem and
[535] assiduous use; in connection with the dance, I shall also have to mention the throwing-board dance, which portrays being wounded in battle.

/270 cont./

000 Civilized man today begins even his first bungling efforts in the drawing art with triangles, squares, circles, and with these and similar figures our ancestors developed the science that is regarded as the highest; he does not see lines and geometric figures anywhere around him in nature -- therefore, he concludes, these fundamental concepts have sprung from his own rich inner self. That they could have originated from the models of pubic coverings, bats, or fish seems to him not only unworthy, but also a ridiculously roundabout course. For what is simpler than drawing a triangle? What is simpler, I reply, than counting to five? Even now the Bakaïrí explains each triangle that I draw for him as a picture of the uluri; he cannot yet count things without the help of his fingers. The number word "5" = hand, which is still found among many primitive peoples, corresponds exactly to the uluri - triangle; in both cases the inner perception of the pattern or the abstraction is derived only from the object, in both the concrete original 000 has asserted its rights for a long time. Neither the facility with which we toss these ideas about nor the fact that the meaning of our number words has evaded all the probings of philology proves that our ancestors followed a course different from that of primitive peoples.

531 802 811

The teacher of geometry today certainly need not take particular pleasure in an uluri in order to sketch a triangle. The uluri is a sort of archaeopteryx of mathematics. How should the flying bird appreciate the fact that it is descended from the creeping or, at best, fluttering reptiles? Nevertheless the bird's inability to understand this origin does not prove the least thing against it. In the same way nothing is proved if we who are excellent flyers in the heights of mathematics can scarcely imagine that earlier human beings were unable to rise to the minor achievement of producing a simple triangle by themselves.

*171 411 531

Use of the ornamentation. On the weapons used -- there were only bows and arrows -- painted designs were scarcely applicable. The throwing stick, too, was decorated only with plaiting around it; a cork cone that was mounted on an arrow shaft as a tip exhibited the decoration of the mereschu design, cf. the illustration, page 91.

/20 cont./

look at this settlement situated on the left side of the Rio Novo. The main aldea of these Indians, which consisted of five ranchos, was at a distance of three turns of the river from the small Brazilian pueblo of Rio Novo situated on the right side of the river. At this place I met Mr. Eliseu, who then held the title of subdirector over the Bakairí.

Conditions among the Rio Novo Bakairí had hardly changed since the time when Karl von den Steinen described them. Also, the population, which I estimated at 60 individuals, was more or less the same. Reginaldo, who had meanwhile become an old man, was still cacique of the two communities of Rio Novo Bakairí. Plate V of my book Indianerstudien in Zentral-Brasilien presents a photograph taken in the aldea of these Indians showing Cacique Reginaldo with his wife in the midst of several other Bakairí, standing in front of the door of his house. The book which he holds in his hand is the work Durch Centralbrasilien, published by Karl von den Steinen, in which he is also represented in a drawing and at which he is looking with great interest. In the aldea there were still various objects which were products of typical Bakairí work, such as for example the large baskets of twigs /banastas/ woven in the ancestral way, and other kinds of baskets which matched exactly in terms of technique and decoration those made by the Bakairí of the tributaries of the Xingu River. (27) The Rio Novo Bakairí

27. Cf. Max Schmidt, Indianerstudien in Zentral-Brasilien, loc. cit., Fig. 174, p. 347.

also still used, besides firearms, bows and arrows for hunting, and these corresponded exactly to those of their fellow countrymen of the Xingu River region. But outside of these objects, made in native fashion, these Bakairí had been changed completely into Brazilian campesinos as a result of the fact that

/20 cont./
Reginaldo and his people had a large number of cattle and several saddle horses. Although among themselves they spoke only in the Bakairí language, all of the men knew the Brazilian language, and it was said that Cacique Reginaldo knew how to read and speak some French. The Rio Novo Bakairí maintained at the time active relations with their fellow countrymen on the Rio Paranatinga. With the eastern Bakairí they hardly had any contacts, except for the Bakairí Joaquim who was the uncle of Cacique Antonio of the Paranatinga aldea and who had a young Bakairí from the Rio Batovi river in his service.

Different were the conditions of the Bakairí in the Rio Paranatinga aldea at the time of my visit. While the population at the time of Karl von den Steinen's expeditions had dwindled in such a way that Karl von den Steinen foresaw the end of this community, the population of the aldea had increased in the meantime with the addition of numerous Bakairí from the Xingu River region. The number of these Bakairí, called by their Paranatinga fellow countrymen Xinguanos, climbed to 34 at the time of my stay with these Indians. The leader of the community was Antonio, who was at this time at the peak of his power. The only insignia /21/ of his rank as comandante of the Indians of the upper Xingu River region, officially granted by the Mato Grosso government, were a pair of red soldier's trousers with a wide white stripe which ran down the side of each leg, but a more practical symbol of his power were several good firearms hanging in his house, which he also used occasionally, according to the Mato Grosso men, against insubordinate fellow countrymen. The majority of the Xinguanos then living in his aldea were totally dependent upon him with regard to economic conditions and made up a valuable component of his power, for he had supplied the most trustworthy men among them with firearms. This small military force was important above all to insure contact between the Rio Paranatinga and the tributaries of the Xingu River against the Kayabí who had unquestionably begun at this time to

619
182 /23 cont./
756 aldea on the Rio Kulisehu to settle with his arts on the Paranatinga.

177 When I was with the Rio Kulisehu Bakairí in May and June
178 of 1901, 14 years had elapsed since their first contact with
[114] articles of European culture. After Karl von den Steinen's expedition, other explorers had also passed through their land. They had become familiar with iron axes, knives, scissors, matches, and other objects of modern culture, and by bartering their native products they had become amply provided with such objects, but their natures and their way of life had barely
•[411] changed. They had become acquainted with the firearms of the Europeans and of their fellow countrymen of the Rio Paranatinga, but they still regarded them with a certain mis-
[226] giving and did not use them either. Fishing, which had been of the greatest importance in the economy of these Indians, was still carried out on a broad scale and in the ancestral way,
[224] fishhooks not being used. In hunting, too, they only used their
241 arrows and long bows built like the ones of old. Agriculture
412 was also carried out in the same manner and with the same digging sticks, with the mere exception that the work of clearing was made much easier by the numerous iron axes that replaced the stone axes of times past. I did not see any more stone axes among these Indians. Undoubtedly they had all been replaced by the far more useful iron axes brought by the explorers who
241 passed through these regions. There were large plantations in
114 the vicinity of the aldeas or at a distance from them, and I myself had the opportunity to observe in the aldea of Maimaieti, situated on the Rio Kulisehu, the way in which a big part of the mountain was cleared for a future plantation. The Indians proudly showed me a spot planted in sweet /mansa, "mild"/ manioc, of which they had received cuttings from the Rio Paranatinga Bakairí. During my stay among the Bakairí of Maimaieti aldea there was never a scarcity of manioc, and I and my companions were always generously provided with
[648] manioc cakes /beijús/. I mention this fact especially, because

wooden benches, and dishes and cups made from gourds.

As the Bacairí were extensive travelers and depended upon fish for a considerable part of their food supply, canoes were an important part of their equipment. The Bacairí canoe (*pépi*) was made from the bark of the jatobá tree. The tough, heavy bark was first stripped from one-half of the tree. Small fires were then lighted on the inside of the bark trough to make it curl. Braces were placed at intervals along the entire length, the bow was tapered, and the stern was squared off by forcing the bark upward at one end. Bacairí canoes varied in size, the larger ones being able to carry as many as 8 men. Canoes of jatobá bark are used by the Bacairí today and are the predominant type among the Indians of the Upper Xingú. The Bacairí also made large tubs out of jatobá bark which were used as settling vessels for manioc juice. The juice of the manioc contains a fine powder or starch which settles on the bottom of the vessel, to be gathered after the liquid is poured off. For gardening, the Bacairí formerly used a digging stick made of hardwood. For hunting, they used a bow (*túka*), round or slightly oval in cross section and from 2 to 2½ meters in length, made from a yellow or reddish wood which was first matured by burying it in mud. The bowstring was made from the fibers of imbauba bark. Arrows (*piréu*) were made from cane with hardwood or bone points. Hunting arrows had two feathers, but arrows used for shooting fish had serrated wooden points and no feathers. The cutting tools of the Bacairí consisted of knives made from bamboo, stone, bones, and shell. Transportation was by canoe, or if over land, goods were carried in a wicker basket supported on the back by a tump line.

ORNAMENTS

While living on the banks of the Kuliseu River, the Bacairí, in common with the other Upper Xingú River tribes, did not use clothing. Men sometimes wore a narrow cotton band (*onegín*) around the waist, with a few tassels hanging in front. Women, after puberty, wore the ululrí. Men wore their hair cut short. Women wore their hair long at the back but cut straight across over the forehead. Hair was cut with a knife made by setting sharp fish teeth into a wooden stick,

Geographically the post is situated ideally on a high land removed from the river and cleared of all vegetation, the jungle appearing only as a narrow fringe along the river banks. Like the rest of the high plateau it is wind swept, and generally pleasant. It must be added that contact with white people, such as is had when a small group of natives go to Cuyabá, has brought syphilis to them, and it may be their mortality is due to this.

One occupation enjoyed in former times is denied them, and that is fishing. There are practically no fish in the Paranatinga, at least up to where the post is located. Since meat is gotten only on rare occasions, and no hunting is done, the diet is mainly one of vegetables and considerably poorer than when they were living in their original state. This may also explain their lowered resistance to disease.

Very little museum material which represents their own products can be collected from the Bakairi. What has not been gotten from the Inspectoria has been brought back on excursions to the Kuluseu. Pottery has not been made since their coming to the post, according to them. The huge vessels that they possess either have been brought with them from their former homes or bartered from the tribes on the Kuluseu. It is claimed that the proper clay cannot be found in the neighborhood of Simõe Lopes.

Arrows are still being made, an iron nail generally being substituted for the old bone point, but most of the arrows also come from the Kuluseu.

For the old hammock made of palm-leaf fibre the cotton hammock has been substituted, but the same open net style has been kept.

Mussel shell ornaments have also been bought from the tribes of the Kuluseu. In brief, almost anything that is found in their village must bear the suspicion that it is not a Bakairi product.

However, they have preserved a few customs, such as filing the upper teeth to a point, wearing under the European clothing the gee string, and ceremonial use of the bull-roarer, and they probably remember many of their ceremonies.

The short time spent at the post was mostly devoted to taking anthropmetric measurements, which were subsequently lost on the Kuluseu, but in some notes I do find the statement that in blood groupings most belong to groups three and four, the former predominating.